

## Prosody, focus and attention in language processing

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Prosody is one of the most fascinating aspects of speech communication. In languages like Dutch and German, speakers use prosodic prominence to highlight the important information (focus) in their message, a principle known as 'information structure'. Prosodic prominence directs the listeners' attention to accented words, which are processed more deeply and memorized better. So far most studies on prosody processing have viewed it as an isolated phenomenon and have not accounted for the fact that it is influenced by individual differences and by the nature of communicative context. These two factors were investigated in two ERP studies that I will discuss in my talk. In the first ERP study on multimodal speech processing we tested how listeners integrate pitch accents and beat gestures. We found early independent effects of beat gestures and prosodic prominence: both cues increased the listeners' attention to the highlighted word. Moreover, we found that beat gestures interacted with pitch accents in a late time window, showing that listeners had more difficulties to integrate beat gestures with unaccented information than with accented information. This finding suggests that listeners interpret beat gestures as emphasis cues and integrate them with the prosodic and information structure of the message. In the second ERP study we addressed prosody processing in populations with high functioning autism and typically developed participants. Our results show that autistic participants experienced difficulties when focus was unaccented, whereas typically developed participants had difficulties when information outside the focus domain was accented. One explanation of our findings could be that typically developed participants process prosody in an automated way, whereas autistic participants follow a top-down processing strategy. Overall, the outcomes of these two ERP studies highlight the importance of individual differences and the need to study prosody in the context of multimodal communicative situations.